

This listing of claims will replace all prior versions of claims in the application.

Claims 1-12. (cancelled)

Claim 13. (original) A method for forming a composite material, comprising introducing ion exchange groups to a resin base; introducing metal ions by treating the resin base with liquid containing metal ions; introducing photocatalyst into the resin base having the introduced metal ions; and forming metal on the surface of a resin base by exposing the resin base having the photocatalyst with radiation activating for the photocatalyst.

Claim 14. (currently amended) The method of claim 13 wherein a reducing agent is introduced into the resin base containing introduced photocatalyst.

Claim 15. (previously presented) The method of claim 13 wherein the introduced metal element in regions not irradiated with electromagnetic radiation is removed thermally.

Claim 16. (currently amended) The method of claim 13 wherein irradiation with electromagnetic radiation is carried out through a master pattern, thereby forming a metal pattern.

Claim 17. (currently amended) The method of claim 16 wherein the valence of the metal ions introduced into the resin base is two or greater.

Claim 18. (original) A method for forming a composite material, comprising:

- a) introducing ion exchange groups to a resin layer,
- b) treating the resin with metal ions;
- c) treating the resin with photocatalyst, and
- d) forming metal on the resin.

Claim 19. (original) The method of claim 18 wherein steps a) through d) are conducted sequentially.

Claim 20. (original) The method of claim 18 further comprising exposing the resin having photocatalyst with radiation activating for the photocatalyst.

Claim 21. (previously presented) The method of claim 18 wherein a reducing agent is introduced into the resin containing photocatalyst.